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This work is funded by UK Research and Innovation, Grant reference MR/Y034430/1 (PI: Angela Aristidou).

This manuscript was presented at the University of Alberta (invited talk), at the peer-reviewed annual colloquium European Group of Organization Studies (EGOS 2024) and at the Stanford SCANCOR research seminar series (2022).

To cite: Aristidou, A., & Sarta, A. (2024). Solving the puzzle of which digital practices are sustainably adopted following a government mandate.

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This draft: July 2024

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Abstract:

Studies of practice diffusion have a rich scholarly tradition and contributed to a strong understanding of how practices and innovations spread from organization to organization (Strang & Macy, 2001; Strang & Soule, 1998). Typically, studies find that organizations become similar when they are in close physical proximity (DiMaggio & Powell, 1983; Greve & Seidel, 2015; Haunschild & Miner, 1997; Kraatz, 1998). Relatedly, these local similarities spawn non-local differences, which is central to a new undertaking in the diffusion literature—how diffusion produces organizational differences (Naumovska, Gaba, & Greve, 2021). Differences are crucial to organization studies since they explain why meaning is ascribed to some organizations over others, why competition is sustained, and why organizations learn at varying rates. Two explanations largely underpin why diffusion creates differences, each centered on the moment of practice adoption. Learning scholars highlight how challenges of *uncertainty* drive organizations to pay attention to their immediate peers for information, which drives adoption through imitation (Gaba & Terlaak, 2013; Greve, 1995). Because peer groups differ, local selection processes make peers look similar and non-peers look different (Lieberman & Asaba, 2006). Alternatively, institutional scholars argue that organizations attend to institution mandates and face challenges of *internal fit* (Tolbert & Zucker, 1983). Organizations feel pressure to adopt mandated practices and subsequently modify practices after adoption to suit the internal needs of the organization, which creates differences between organizations due to the idiosyncrasies of internal structures (Ansari, Fiss, & Zajac, 2010; Zbaracki, 1998).

Despite these important contributions, we continue to lack a holistic understanding of how diffusion produces differences, particularly when theoretical boundary conditions are considered. Diffusion research emphasizes attention to peers and attention to institutional mandates, but lacks a clear perspective on a

crucial audience within an organization's purview—the markets that organizations service and the needs of users. If diffusing practices fail to resolve an unmet market need, at least some organizations are likely to act upon the unmet need in ways unexplained by diffusion theory. By a *market*, we mean the actual and potential audiences to which an organization attempts to provide products or services. If practices adopted by peers or practices mandated by authorities fail to resolve an unmet market need, organizations are likely to behave in ways not fully explained by learning and institutional perspectives.

In this study, we ask *how do organizations address unmet needs in their environments while being pressured to adopt a multitude of diffusing practices?* We explore this question by focusing on a context of societal importance: the creation of cross-sector healthcare collaborations as new organizational forms to integrate healthcare services (e.g., collaborations of hospitals, community organizations, and public health units under one umbrella). Our context takes place in Ontario, Canada, where the provincial government established a new model to integrate healthcare services by establishing what is known as an Ontario Health Team (OHT). Our context is particularly relevant since a set of practices from a central authority (government) was predefined and used as criteria for approving an OHT's operation and funding (acting as an institutional mandate). At the same time, Ontario's geographic and demographic diversity allows us to uniquely examine how OHTs navigate patient need differences under the mandate.

We take an abductive approach to our analysis and focus specifically on how practices established by the government spread to and are approved in 50 OHT applications. Using structural topic modeling (STM) on 2,594 qualitatively coded activities present in approved applications, we identify 10 important practices established by the government. We then examine approved applications across 3 distinct waves—29 OHTs in 2019 (wave 1), 13 OHTs in 2020 (wave 2), and 8 OHTs in 2021—and infer a diffusion process since there was no change in the government's approval criteria across waves. Importantly, we find evidence that OHTs propose and gain approval for 4 new practices beyond the 10 that are proposed in the government mandate. The new practices that relate to mandated practices by widening common bundles of practices. This, combined with addressing unmet patient needs, justifies the approval of new practices.

Once we inductively uncover the approved practices, we deductively model the diffusion of practices and uncover a third source of differences in the diffusion process that specifically addresses unmet patient needs. Our research design places us in a unique position to analyze how practices spread (1) from the government mandate to each OHT, (2) between OHTs geographically nearby, and (3) to serve health needs present in attributed local populations, which we model in a fuzzy-set Qualitative Comparative Analysis (fsQCA). Because fsQCA models equifinality (Misangyi et al., 2017), we reveal the known learning and institutional perspectives while also revealing a third source of heterogeneous diffusion (Furnari et al., 2021). We label this third source *need-based adaptation*—the process of expanding upon practices to better service end user needs. Need-based adaptation relies on generating new practices that, in our study, are approved in wave 1 before diffusing to OHTs approved in waves 2 and 3. Because these practices emanate from OHTs themselves, the diffusion is *bottom-up* and elaborates on the top-down government guidance. As a result, diffusion is a multidirectional process rather than the unidirectional processes in the literature that emphasize ideas spreading from a single source (Naumovska et al., 2021; Strang & Tuma, 1993).

Our findings contribute directly to research on practice diffusion by identifying diffusion as both centralized *and* decentralized as organizations seek to serve local communities. Crucially, this reframes diffusion from a cascading process to a process where cascades also generate innovation. The generating process is somewhat constrained, however, as new practices must sufficiently align to both institutional pressures and unmet market needs. The latter point also contributes directly to research on adaptation by theoretically specifying adaptation as a tenuous process hidden by competing forces between institutions and stakeholders. OHTs walk a fine line between the needs of governments and patients to adapt to the demands of both parties. The result is a compromise across levels in multilevel adaptation, which differs from prior research that depicts complementary effects across levels of analysis in multilevel adaptation (Dattée & Barlow, 2017). From this, we infer that organizations are often faced with an adaptation dilemma in that gaining institutional approval may be at odds with serving local needs (patients in our study) and that perfect congruence to both may be intractable and detrimental. We argue that this tension is

underexplored and deserves a central place in future studies of adaptation. Classifying organizations as either well-adapted or maladapted, a common approach, is often an oversimplification.

Finally, we contribute a novel epistemological approach that benefits both studies of diffusion, adaptation, and configurations. Our STM approach enables practices deviations to be identified based on semantic distance, which adds nuance and continuity to diffusion studies than binary coding that only considers adoption or abandonment. Additionally, our use of STM in conjunction with fsQCA directly reveals how configurations manifest in processes (such as diffusion and adaptation). As a result, we are able to elaborate on theoretical perspectives to reveal boundaries. Equifinal paths enable multiple perspectives to coexist as a form of theory elaboration.

Brief Empirical Context: Ontario Health Teams as Integrated Healthcare Collaborations

OHTs were introduced in 2019 in the province of Ontario, Canada to improve the challenge of hospital overcrowding. The Ontario Ministry of Health released a document entitled *Ontario Health Teams: Guidance for Health Care Providers and Organizations* on April 5, 2019, outlining the structure of an OHT and how healthcare organizations could become an OHT. Three principles were considered vital to any approved application: (1) healthcare practices were to be better *integrated* across service providers, (2) *digital* healthcare practices were to increase to ease pressure on in-person care, and (3) healthcare practices were to be more *equitable*, specifically for indigenous and francophone populations.

Condensed Results Summary

The key outcome condition is measured as OHT members that deviate from government-recommended practices¹, which produces 3 configurations that repeat themselves across the 3 approval waves (see Table 1). Wave 1 yields an expected configuration that organizations would largely propose similar practices to those mandated; however, they will differ in degrees of emphasis (Ansari et al., 2010). *Internal Modifiers* reflect this behavior. These organizations differ from their peers, they do not generate

¹ Measurements for all conditions are omitted for brevity. The outcome condition is measured based on the topic distance (from the STM model) between proposed practices for each OHT compared to the recommended practices in the government guidance document.

new practices nor do they recognize worsening patient indicators. We infer that these organizations are institutionally-focused, since they propose the same practices in government guidance, but differ in the degree of emphasis suggested by government—a version of “adopt and adapt” (Ansari et al., 2010). Alongside these organizations, we discover two additional configurations that differ based on local patient needs. *Need Adapters* are unique in that these organizations propose new practices specifically for worsening health outcomes. Here, we uncover a third source of heterogeneity between organizations. It was previously believed that local adaptation only occurred in the absence of mandates (Tolbert & Zucker, 1983) or that institutionalized practices were symbolically adhered to even if they differed internally (Meyer & Rowan, 1977). We find that stakeholder needs persist despite the presence of a mandate. Alternatively, *Need Modifiers* are cognizant of worsening patient outcomes, yet their relatively larger target population allows them to leverage the practices proposed by the Ministry of Health. These organizations differ in the emphasis on specific practices, but do not rely on generating new practices outside of Ministry guidance.

Crucially, *Need Adapters* set up an additional source of diffusion in subsequent waves. We see the repetition when examining the results for wave 2. *Need Adapters* learn from approved OHTs in wave 1 and continue to innovate. We infer that diffusion for this configuration is behavior-based rather than practice-based, meaning that proximate OHTs who deviated in wave 1 generate permission to continue deviations so long as patient needs are justified. In addition to *Need Adapters*, expected configurations from theory emerge. A second set of *Internal Modifiers* is present with almost identical explanatory conditions to those exhibited in wave 1. There is also a configuration of *Copycat Modifiers* that differ primarily based on peers close in proximity. There is little indication that these organizations are focused on worsening health indicators. Instead, this configuration of organizations appears rather unfocused, potentially exhibiting behavior associated with the challenges of COVID-19 whereby priorities shifted rapidly.

Finally, the third analysis depicts a situation where diffusion begins to stabilize. The third iteration of *Need Adapters* emerge; however, without learning from local OHTs. With several approved *Need Adapters* present throughout the province, the condition of *High Peer Deviation* is unnecessary and absent suggesting that early deviating practices became taken for granted (DiMaggio & Powell, 1983). The

theoretical distinction in this configuration is that *behavior* becomes institutionalized and not form or structure—a crucial element that aligns with the diffusion literature.

References

- Ansari, S. M., Fiss, P. C., & Zajac, E. J. 2010. Made to Fit: How Practices Vary As They Diffuse. *Academy of Management Review*, 35(1): 67–92.
- Dattée, B., & Barlow, J. 2017. Multilevel Organizational Adaptation: Scale Invariance in the Scottish Healthcare System. *Organization Science*, 28(2): 301–319.
- DiMaggio, P. J., & Powell, W. W. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2): 147–160.
- Furnari, S., Crilly, D., Misangyi, V. F., Greckhamer, T., Fiss, P. C., et al. 2021. Capturing Causal Complexity: Heuristics for Configurational Theorizing. *Academy of Management Review*, 46(4): 778–799.
- Gaba, V., & Terlaak, A. 2013. Decomposing Uncertainty and Its Effects on Imitation in Firm Exit Decisions. *Organization Science*, 24(6): 1847–1869.
- Greve, H. R. 1995. Jumping Ship: The Diffusion of Strategy Abandonment. *Administrative Science Quarterly*, 40(3): 444.
- Greve, H. R., & Seidel, M. D. L. 2015. The Thin Red Line Between Success and Failure: Path Dependence in the Diffusion of Innovative Production Technologies. *Strategic Management Journal*, 36(4). <https://doi.org/10.1002/smj.2232>.
- Haunschild, P. R., & Miner, A. S. 1997. Modes of Interorganizational Imitation: The Effects of Outcome Salience and Uncertainty. *Administrative Science Quarterly*, 42(3): 472.
- Kraatz, M. S. 1998. Learning by Association? Interorganizational Networks and Adaptation to Environmental Change. *Academy of Management Journal*, 41(6): 621–643.
- Lieberman, M. B., & Asaba, S. 2006. Why Do Firms Imitate Each Other? *Academy of Management Review*, 31(2): 366–385.
- Meyer, J. W., & Rowan, B. 1977. Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, 83(2): 340–363.
- Misangyi, V. F., Greckhamer, T., Furnari, S., Fiss, P. C., Crilly, D., et al. 2017. Embracing Causal Complexity. *Journal of Management*, 43(1): 255–282.
- Naumovska, I., Gaba, V., & Greve, H. 2021. The Diffusion of Differences: A Review and Reorientation of 20 Years of Diffusion Research. *Academy of Management Annals*, annals.2019.0102.
- Strang, D., & Macy, M. W. 2001. In Search of Excellence: Fads, Success Stories, and Adaptive Emulation. *American Journal of Sociology*, 107(1): 147–182.
- Strang, D., & Soule, S. A. 1998. Diffusion in Organizations and Social Movements: From Hybrid Corn to Poison Pills. *Annual Review of Sociology*, 24(1): 265–290.
- Strang, D., & Tuma, N. B. 1993. Spatial and Temporal Heterogeneity in Diffusion. *American Journal of Sociology*, 99(3): 614–639.
- Tolbert, P. S., & Zucker, L. G. 1983. Institutional Sources of Change in the Formal Structure of Organizations: The Diffusion of Civil Service Reform, 1880–1935. *Administrative Science Quarterly*, 28(1): 22.

Zbaracki, M. J. 1998. The Rhetoric and Reality of Total Quality Management. *Administrative Science Quarterly*, 43(3): 602–636.

Table 1: fsQCA Configurational Paths to Heterogeneous Diffusion Across Waves

Configurational Paths to Heterogeneity Differentiators to Ministry Guidance									
	Cohort 1			Cohort 2			Cohort 3		
Explanatory Conditions	Internal Modifier	Need Adapter	Need Modifier	Internal Modifier	Need Adapter	Copycat Modifier	Need Adapter	Need Modifier	Copycat Modifier
High Peer Alignment	⊗	⊗	⊗						
Narrow Target	●		⊗	●	●	⊗	●	⊗	●
High Issue Recognition	⊗	●	●	⊗	●	⊗	●	●	⊗
High Need Innovation	⊗	●		⊗	●	⊗	●	⊗	⊗
High Peer Deviation				⊗	●	●	⊗	⊗	●
PRI Consistency	0.834	0.946	0.747	0.828	0.772	0.967	0.686	1.000	1.000
Raw Coverage	0.224	0.254	0.233	0.166	0.356	0.262	0.286	0.208	0.428
Unique Coverage	0.137	0.106	0.088	0.034	0.334	0.151	0.131	0.104	0.279
Solution Consistency	0.900			0.875			0.931		
PRI Consistency	0.865			0.848			0.897		
Solution Coverage	0.493			0.392			0.675		
Exemplar Cases	E-6 W-18	E-3 N-10 W-10	C-13 W-9	C-4	T-27 N2-2 T-31 W-8	T-28	C1-1 C3-6 C3-7	C3-4	C3-3